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SECRET - UNCLASSIFIED

WHAT IS CLAIMED IS:

1. A substantially purified CD40pR receptor.
2. The substantially purified receptor of claim 1 which has a molecular weight of about 39 kilodaltons.
3. The substantially purified receptor of claim 1 which binds to CD40-Ig.
4. The substantially purified receptor of claim 1 which binds to the monoclonal antibody MR1.
5. A soluble ligand for CD40CR, comprising at least a portion of CD40 protein.
6. The soluble ligand of claim 5 which comprises a portion of CD40 protein which lacks a transmembrane domain.
7. The soluble ligand of claim 5 or 6 which further comprises at least a portion of an immunoglobulin molecule.
8. The soluble ligand of claim 5 which is CD40-Ig.
9. A soluble ligand for CD40CR, comprising at least a portion of an immunoglobulin molecule.
10. The soluble ligand of claim 9 in which the immunoglobulin molecule is capable of

competitively inhibiting the binding of CD40 to CD40CR.

11. The soluble ligand of claim 9 in which the immunoglobulin molecule is capable of competitively inhibiting the binding of nonbonded antibody MRI to its target antigen.

12. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is an antiproliferative agent.

13. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is an alkylating agent.

14. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is an antimetabolite.

15. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is an antibiotic.

16. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is a vinca alkaloid.

17. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is an enzyme.

18. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is a platinum coordinated complex.

SECRET - SECURITY INFORMATION

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19. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is a radioisotope.
20. The soluble ligand according to claim 9, 10 or 11 which further comprises a second molecule which is a fluorescent compound.
21. Monoclonal antibody MRI of a fragment thereof.
22. A method of inhibiting B-cell activation comprising exposing a mixture of B-cells and helper T cells to an effective concentration of ligand that binds to CD40CR.
23. The method of claim 22 in which the ligand comprises at least a portion of CD40 protein.
24. The method of claim 22 in which the ligand comprises a portion of CD40 protein which lacks a transmembrane domain.
25. The method of claim 23 or 24 in which the ligand further comprises at least a portion of an immunoglobulin molecule.
26. The method of claim 22 in which the ligand is CD40-Ig.
27. The method of claim 22 in which the ligand comprises at least a portion of an immunoglobulin molecule.
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28. The method of claim 27 in which the immunoglobulin molecule is capable of competitively inhibiting the binding of CD40 to CD40CR;
29. The method of claim 27 in which the immunoglobulin molecule is capable of competitively inhibiting the binding of monoclonal antibody M1 to its target antigen.
30. A method of treating a subject suffering from a disorder associated with B-cell activation, comprising administering to the subject a therapeutic amount of ligand that binds to CD40CR;
31. The method of claim 30 in which the disorder is an allergy;
32. The method of claim 30 in which the disorder is an autoimmune disease;
33. The method of claim 30 in which the ligand comprises at least a portion of CD40 protein.
34. The method of claim 30 in which the ligand comprises a portion of CD40 protein which lacks a transmembrane domain.
35. The method of claim 33 or 34 in which the ligand further comprises at least a portion of an immunoglobulin molecule.
36. The method of claim 30 in which the ligand is CD40-Ig.

SECRET - TECHNICAL

37. The method of claim 30 in which the ligand comprises at least a portion of an immunoglobulin molecule.
38. The method of claim 37 in which the immunoglobulin molecule is capable of competitively inhibiting the binding of CD40 to CD40CR.
39. The method of claim 37 in which the immunoglobulin molecule is capable of competitively inhibiting the binding of monoclonal antibody MRI to its target antigen.
40. A pharmaceutical composition comprising CD40-Ig in a suitable pharmaceutical carrier.
41. A pharmaceutical composition comprising monoclonal antibody MRI or a fragment thereof in a suitable pharmaceutical carrier.

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